CLAIMS

1.   A method of parallel execution of spreadsheet calculations including the steps of:

defining at least one custom function that passes arguments and a

5   function identifier to an evaluation process from a spreadsheet cell for parallel evaluation of said custom function;

constructing an evaluation table for storing interim and final results of said custom function;

returning said interim result to said spreadsheet cell during a first

10   evaluation cycle;

forcing reevaluation of said spreadsheet cell; and

returning said final result from said evaluation table to said spreadsheet cell.

2.   The method of claim 1 wherein the evaluation process

15   distributes the calculation to one or more processors.

3.   The method of step 1 wherein the interim result may have states of under evaluation, unevaluated or evaluated.

4.   The method of step 1 wherein the interim result may have a value of undefined when a state of the interim result is under

20   evaluated or unevaluated.

5.   The method of claim 1 wherein the step of returning interim results to said spreadsheet cell displays an error in said spreadsheet cell when a value of said interim result is undefined.

6.   The method of claim 1 wherein there are multiple custom

25   functions and the method is repeated until all custom functions are evaluated.

7.   The method of claim 1 wherein the custom function is an arbitrary executable program which takes parameters from the spreadsheet cell and returns the final result to the spreadsheet cell.

8.   The method of claim 1 wherein the step of forcing reevaluation of said spreadsheet cell uses a technique selected from built-in automatic re-evaluation, command complete re-evaluation, or command partial re-evaluation.

5   9.   A parallel execution apparatus for spreadsheet calculations comprising:

means for storing and processing a spreadsheet of multiple spreadsheet cells, at least one said cell containing a custom function;

means for evaluating said custom function;

10   means for storing interim and final results of the evaluation of said custom functions;

means for displaying said interim result during a first cycle and said final result during a later cycle; and

timing means for determining said first and said later cycle.

15   10.   A computer of the form having one or more processors, timing means associated with said processors, memory means for storing results of calculations, and display means, when programmed to perform a parallel execution process including the steps of:

defining at least one custom function that passes arguments and a

20   function identifier to an evaluation process from a spreadsheet cell for parallel evaluation of said custom function;

constructing an evaluation table in said memory means for storing interim and final results of said custom function;

returning said interim result to said spreadsheet cell during a first

25   evaluation cycle controlled by said timing means;

forcing reevaluation of said spreadsheet cell; and

returning said final result from said evaluation table to said spreadsheet cell for display on said display means.